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6. (Amended) The device as in Claim 1, wherein the unpackaged semiconductor die is wire bonded to the package module.

7. (Amended) The device as in Claim 1, wherein the unpackaged semiconductor die is attached to the package module by flip-chip attachment.

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9. (Amended) The device as in Claim 1, wherein the unpackaged semiconductor die is encapsulated onto the package module.

41. (New) The device as in Claim 9, wherein the encapsulated semiconductor die forms a substantially rectangular structure on the package module.

42. (New) The device as in Claim 22, wherein the encapsulated graphics-processing die forms a substantially rectangular structure on the package module.

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43. (New) A multi-die module, comprising:
a substrate having a first surface and a second surface;
an unpackaged semiconductor die mounted to the first surface of the substrate, the semiconductor die encapsulated in a structure having a rectangular footprint; and
a packaged semiconductor die mounted on the first surface of the substrate.

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44. (New) The multi-die module as in Claim 43, further including a second packaged semiconductor die mounted on the first surface of the substrate.

45. (New) The multi-die module as in Claim 43, further including a plurality of unpackaged semiconductor die mounted on the first surface of the substrate.

46. (New) The multi-die module as in Claim 43, wherein the unpackaged semiconductor die is mounted to the first surface of the substrate by wire bonding.

~~47. (New) The multi-die module as in Claim 43, wherein the encapsulating structure is further comprised of an encapsulating material including epoxy, metal cap or silicon coatings.~~

48. (New) The multi-die module as in Claim 43, further including a heat sink.

~~49. (New) The multi-die module as in Claim 43, wherein each of the unpackaged semiconductor die and packaged semiconductor die has a top surface, and wherein the top surfaces of the unpackaged semiconductor die and the packaged semiconductor die are of substantially equal distance from the first surface of the substrate.~~

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50. (New) The multi-die module as in Claim 43, wherein the unpackaged semiconductor die is underfilled.

51. (New) The multi-die module as in Claim 43, wherein each of the unpackaged semiconductor die and packaged semiconductor has a top surface, and wherein the distance between top surface of the unpackaged semiconductor die and the first surface of the substrate is different than the distance between the top surface of the packaged semiconductor die and the first surface of the substrate.

52. (New) The multi-die module as in Claim 51, further including a shim positioned over the top surface of the unpackaged semiconductor die such that a top of the shim and the top surface of the packaged semiconductor die are of substantially equal distance from the first surface of the substrate.

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53. (New) The multi-die module as in Claim 43, wherein the unpackaged semiconductor die is a graphics processor.

54. (New) The multi-die module as in Claim 43, wherein the packaged semiconductor die is a memory.

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55. (New) A method of forming a multi-die module, comprising:

mounting a first semiconductor die to a module substrate;

forming an electrical connection between the first semiconductor die and the package

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module substrate;

encapsulating the first semiconductor die in a rectangular structure;

placing a second semiconductor die in a corresponding die package;

mounting the die package to the module substrate; and

forming an electrical connection between the die package and the module substrate.